

## REMARKS

This is a full and timely response to the outstanding non-final Office Action mailed January 12, 2006. Reconsideration and allowance of the application and presently pending claims are respectfully requested.

### **Present Status of Patent Application**

Upon entry of the amendments in this response, claims 29-34, 36-40, 43-45, and 48-55 remain pending in the present application. Claims 1-28, 35, 41-42, and 46-47 have been canceled. Applicants reserve the right to pursue the subject matter of these canceled claims in a continuing application, if Applicants so choose, and do not intend to dedicate the canceled subject matter to the public. Claims 48-55 are newly presented. Applicants believe that no new matter has been introduced in the newly presented claims. Claims 29, 30, 34, 36, 38, 39, 43, and 44 have been currently amended with no addition of new matter. Reconsideration and allowance of the application and presently pending claims are respectfully requested.

### **A. Claim Rejections under 35 U.S.C. §112**

#### **Statement of the Rejection**

Claims 29-47 have been rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. Specifically, the Office Action refers to claims 29, 38, and 41, which recite in part, “a first pair of beams that is used to perform time-domain equalization of the light pulse” and “using the first pair of beams to perform time-domain equalization of the light pulse.” The Office Action further states that the “specification fails to disclose how time-domain equalization is performed by merely “using the first pair of beams” and thus fails to enable one skilled in the art to use the invention.”

#### **Response to the Rejection**

##### **Claim 29**

Applicants have suitably amended claim 29 to omit the phrase “a first pair of beams that is used to perform time-domain equalization of the light pulse.” Amended claim 29 now recites, in relevant part:

a walk-off crystal configured to split each of the optically scaled first and second beams ~~receive the rotated first beam and operable to split the rotated first beam into a first and a second pair of beams; and that is used to perform time-domain equalization of the light pulse~~

an array of photodetectors comprising a first and a second pair of photodetectors configured to receive the first and the second pair of beams respectively and generate therefrom a first and a second electrical component of an electrical signal that corresponds to the input optical signal after time-domain equalization.

Time-domain equalization carried out using two (or more) pairs of beams, as defined above in currently amended claim 29, has been described in Applicants' specification - specifically in pages 15-18 that describe an embodiment shown in FIG. 11.

Applicants therefore respectfully assert that claim 29 is now allowable and hereby request withdrawal of the rejection followed by allowance of claim 29.

**Claim 38**

Applicants have suitably amended claim 38 to omit the phrase "using the first pair of beams to perform time-domain equalization of the light pulse." Amended claim 38 now recites, in relevant part:

transmitting the ~~rotated~~ optically scaled first and second beams ~~first beam~~ through a walk-off crystal to produce a first and a second pair of beams respectively; and

using a photodetector to generate from the first and second pair of beams a first and a second electrical component respectively of an electrical signal that corresponds to the input optical signal after time-domain equalization.

~~using the first pair of beams to perform time-domain equalization of the light pulse.~~

Time-domain equalization carried out using two (or more) pairs of beams, as defined above in currently amended claim 38, has been described in Applicants' specification - specifically in pages 15-18 that describe an embodiment shown in FIG. 11.

Applicants therefore respectfully assert that claim 38 is now allowable and hereby request withdrawal of the rejection followed by allowance of claim 38.

**Claims 35, 41, 42, 46, and 47**

Applicants have currently canceled claims 35, 41, 42, 46, and 47 and consequently assert respectfully that the rejection of claims 35, 41, 42, 46, and 47 have been rendered moot.

**Claims 30, 31-34, and 36-37**

Because currently amended claim 29 is allowable, claims 30, 31-34, and 36-37 that depend directly or indirectly on claim 29 are also allowable as a matter of law. In re Fine, 837 F.2d 1071 (Fed. Cir. 1988). Consequently, Applicants respectfully request withdrawal of the rejection, followed by allowance of claims 30, 31-34, and 36-37.

**Claims 39, 40, and 43-45**

Because currently amended claim 38 is allowable, claims 39, 40, and 43-45 that depend directly or indirectly on claim 38 are also allowable as a matter of law. *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988). Consequently, Applicants respectfully request withdrawal of the rejection, followed by allowance of claims 39, 40, and 43-45.

**B. Claim Rejections under 35 U.S.C. §102**

**Statement of the Rejection**

Claims 29, 34, 35, 38, 39, 41, 42, and 44 have been rejected under 35 U.S.C. §102(e), as being anticipated by Sorin et al. (US Patent No. 6,256,103)

**Response to the Rejection**

**Claim 29**

In addition to defining various claim elements, Applicants' claim 29 discloses a positional relationship between the various elements of the claim. For example, the "delay component (is) optically coupled to the beamsplitter," "the birefringent component (is) configured to receive the delayed first beam... from the delay component," and the "walk-off crystal (is) configured to (receive beams from the birefringent component)" This positional relationship between the various elements has been clearly shown in Applicants' various figures, including FIG. 11, and has been described in Applicants' specification.

However, it is unfortunate that the Office Action has selectively chosen various elements from Sorin's Figs 8 and 17, which allegedly anticipate Applicants' various elements of claim 29, and combined these elements in a manner not disclosed by Sorin, to reject Applicants' claim 29.

For example, the Office Action refers to Sorin's fig. 17 to identify a delay unit 1794 that allegedly anticipates Applicants' delay component; and a half-wave plate 1796 that allegedly anticipates Applicants' birefringent component. The Office Action then refers to Sorin's fig. 8 to identify an optical coupler 820 that allegedly anticipates Applicants' beamsplitter; and a polarizing beam splitter 824 that allegedly anticipates Applicants' walk-off crystal. Applicants respectfully traverse the Office Action assertion that Sorin's various elements anticipate Applicants' claim 29 elements. For example, Applicants respectfully traverse the Office Action assertion that Sorin's optical coupler 820 anticipates Applicants' beamsplitter.

Even if, arguably, Sorin's elements accurately anticipated Applicants' claim elements, Applicants respectfully assert that Sorin does not disclose that these various elements are

~~interconnected~~<sup>arranged</sup> in the manner defined by Applicants' claim 29. To the contrary, Sorin describes the relationship between his figs. 17 and 8 in his col. 16, lines 26-27 as: "intensity noise reducer 1784 of FIG. 17 can be utilized on the signal fiber and/or the local oscillator fiber 1786." In light of this statement, Sorin's intensity noise reducer 1784, which contains delay unit 1794 (allegedly anticipating Applicants' delay component), is located ahead of Sorin's optical coupler 820 (which allegedly anticipates Applicants' beamsplitter). This configuration is in contrast to Applicant's claim 29 that defines delay component as configured to receive from the beamsplitter, a plurality of beams generated by the beamsplitter.

In addition to the above-mentioned remarks related to the improper rejection of claim 29, Applicants' wish to point out that currently amended claim 29 now includes: "an array of photodetectors comprising a first and a second pair of photodetectors configured to receive the first and the second pair of beams respectively and generate therefrom a first and a second electrical component of an electrical signal that corresponds to the input optical signal after time-domain equalization."

In summary, Applicants respectfully assert that in addition to not disclosing various other aspects of claim 29, the cited prior art of Sorin further does not disclose "the array of photodetectors" of Applicants' claim 29. Consequently, Applicants request withdrawal of the rejection of claim 29 under 35 U.S.C. §102(e) followed by allowance of claim 29.

#### **Claim 34**

Because currently amended claim 29 is allowable, claim 34 that depends directly on claim 29 is also allowable as a matter of law. *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988). Consequently, Applicants respectfully request withdrawal of the rejection, followed by allowance of claim 34.

#### **Claim 35**

Applicants have currently canceled claim 35 and consequently assert respectfully that the rejection of claim 35 has been rendered moot.

#### **Claim 38**

The Office Action has rejected claim 38 using statements made in common to the rejection of claim 29. However, in contrast to claim 29, which is a system claim, claim 38 is a method claim for performing time-domain equalization. Applicants respectfully point out that method claim 38 may be implemented using a variety of system elements that are not necessarily restricted to those defined in system claim 29.

Nonetheless, the arguments presented above by Applicants with respect to claim 29 are equally relevant to claim 38 and in the interests of brevity will not be repeated herein.

Applicants respectfully assert that Sorin does not disclose the sequence of method steps enumerated in Applicants' claim 38. Furthermore, Applicants' currently amended claim 38 includes: "using an array of photodetectors to generate from the first and the second pair of beams a first and a second electrical component respectively of an electrical signal that corresponds to the input optical signal after time-domain equalization."

In summary, Applicants respectfully assert that in addition to not disclosing various other aspects of claim 38, the cited prior art of Sorin further does not disclose the step "using an array of photodetectors" of Applicants' claim 38. Consequently, Applicants request withdrawal of the rejection of claim 38 under 35 U.S.C. §102(e) followed by allowance of claim 38.

**Claims 39 and 44**

Because currently amended claim 38 is allowable, claims 39 and 44 that depend directly on claim 38 are also allowable as a matter of law. *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988). Consequently, Applicants respectfully request withdrawal of the rejection, followed by allowance of claims 39 and 44.

**Claims 41 and 42**

Applicants have currently canceled claims 41 and 42. Consequently, Applicants respectfully assert that the rejection of claims 41 and 42 have been rendered moot.

**C. Rejections under 35 U.S.C. §103(a)**

**1. Claims 33, 36, and 37**

**Statement of the Rejection**

Claims 33, 36, and 37 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Sorin.

**Response to the Rejection**

Attention is respectfully drawn to MPEP 706.02(I)(2) (*II. Evidence required to establish common ownership*), which is reproduced below in pertinent part for easy reference:

The statement concerning common ownership should be clear and conspicuous (e.g., on a separate piece of paper or in a separately labeled section) in order to ensure that the examiner quickly notices the statement. Applicants may, but are not required to, submit further evidence, such as assignment records, affidavits or declarations by the common owner, or court decisions, *in addition to* the above-mentioned statement concerning common ownership.

For example, an attorney or agent of record receives an Office action for Application X in which all the claims are rejected under 35 U.S.C. 103(a) using Patent A in view of Patent B wherein Patent A is only available as prior art under 35 U.S.C. 102(e), (f), and/or (g). In her response to the Office action, the attorney or agent of record for Application X states, in a clear and conspicuous manner, that:

“Application X and Patent A were, at the time the invention of Application X was made, owned by Company Z.”

This statement alone is sufficient evidence to disqualify Patent A from being used in a rejection under 35 U.S.C. 103(a) against the claims of Application X.

In light of MPEP 706.02(I)(2) and the statement provided below, Applicants respectfully assert that Sorin is disqualified from being used in the rejection of claims 33, 36 and 37. As a result, Applicants respectfully request withdrawal of the rejection followed by allowance of claims 33, 36 and 37.

#### **STATEMENT OF COMMON OWNERSHIP**

Application number 10/007,531 titled “Equalization of Optical Signals” (Ken A. Nishimura et al.) and US patent 6,256,103 B1 titled “System and Method for Optical Heterodyne Detection of an Optical Signal” (Sorin et al.) were, at the time the invention of Application number 10/007,531 was made, owned by Agilent Technologies, Inc., Palo Alto, CA (US).

2. **Claims 30 and 43**

**Statement of the Rejection**

Claims 30 and 43 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Sorin in view of Epworth (US Patent No. 6,271,952).

**Response to the Rejection**

Attention is respectfully drawn to MPEP 706.02(I)(2) (*II. Evidence required to establish common ownership*), which was cited above with reference to the rejection of claims 33, 36, and 37.

In light of MPEP 706.02(I)(2) and the statement provided below, Applicants respectfully assert that Sorin is disqualified from being used in the rejection of claims 30 and 43. As a result, Sorin cannot be properly combined with Epworth as done in the Office action for rejecting claims 30 and 43. Applicants respectfully request withdrawal of the rejection followed by allowance of claims 30 and 43.

**STATEMENT OF COMMON OWNERSHIP**

Application number 10/007,531 titled "Equalization of Optical Signals" (Ken A. Nishimura et al.) and US patent 6,256,103 B1 titled "System and Method for Optical Heterodyne Detection of an Optical Signal" (Sorin et al.) were, at the time the invention of Application number 10/007,531 was made, owned by Agilent Technologies, Inc., Palo Alto, CA (US).


**Prior Art Made of Record**

The prior art made of record has been considered, but is not believed to affect the patentability of the presently pending claims.

**CONCLUSION**

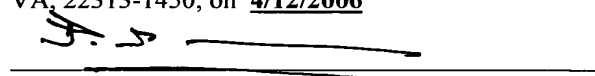
In light of the foregoing amendments and for at least the reasons set forth above, Applicants respectfully submit that all objections and/or rejections have been traversed, rendered moot, and/or accommodated, and that claims 29-34, 36-40, 43-45, and 48-55 are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims is hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the Undersigned Representative at (404)-610-5689.

Respectfully submitted,

  
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